
ASOS MODIFICATION NOTE 73, REVISION D (for Electronics Technicians)

Maintenance, Logistics, and Acquisition Division

W/OPS12: WDW

SUBJECT : Replacement Acquisition Control Unit (ACU) processor board and Single Cabinet Assembly (SCA) processor board

PURPOSE : Instructions for installing the Automated Surface Observing System (ASOS) ACU processor board and SCA processor board

EQUIPMENT AFFECTED : ASOS ACU (AACU) and SCA (ASCA)

PARTS REQUIRED : 1.A. For ACU systems:
One fan assembly kit. (S100-1A2MP4)
One ACU processor board (standard). (S100-1A2A1-2)
Outlet strip (if not present). (S100-1W6A1)
1.B. For SCA systems:
One SCA processor board (high-temperature) (S100-1A2A1-3)
2. Two IACK (minisocket) jumpers (S100-1A2-J1)
3. Two (blank VME) front panels (S100-1A2A11)
4. One serial RS-232 cable with DB-9 and RJ-45 ends .(S100-TE311)

MODIFICATION PROCUREMENT : The parts required will be issued to each site by W/OPS12 from the National Logistics Support Center.

EFFECTIVITY : All ASOS Sites

ESTIMATED TIME REQUIRED : 1 hour

EFFECT ON OTHER INSTRUCTIONS : Supersedes all previous versions of ASOS Modification Note 73.

AUTHORIZATION : This modification is authorized by Engineering Change Proposal **S01141**.

VERIFICATION STATEMENT : This modification has been tested for operational integrity and verified at the National Weather Service (NWS) Headquarters, Silver Spring, Maryland (SP1) and the test sites listed in Attachment A.

SPECIAL INSTRUCTIONS : None.

GENERAL:

This modification note provides the steps necessary for the installation of one new processor board in either the ACU or SCA. This system modification replaces the two existing Xycom CPU boards and one memory board in the ACU or SCA. For the ACU, the replacement consists of

one Synergy single board computer (SBC), two blank covers, and an auxiliary cooling fan. For the SCA, the replacement consists of one extended temperature range Synergy SBC and two blank covers (cooling fans already exist in the SCA). Where a blank cover replaces a board, an IACK jumper must be installed on the back of the VME rack.

NOTE: This modification note is a hardware change to the ASOS ACU and SCA cabinets. There will be no operational software change to the ASOS code at this time.

The new ASOS processor and memory board is a Power PC based VMEbus SBC. This SBC runs at 300 MHz, boasts 1 MB of L2 backside cache, 128 KB of non-volatile random access memory (NVRAM), and contains 8 MB of User Flash memory (into which the ASOS FIRMWARE code will be installed using this procedure). Additional processing power is provided by a Peripheral Component Interconnect (PCI) Mezzanine Card (PMC) situated behind the CPU with 256 MB of Synchronous Dynamic (SDRAM), and a lower extension Card with an additional 8 MB of NVRAM with battery-backup.

BEFORE INSTALLATION OF FIRMWARE UPGRADE:

1. Call the ASOS Operations and Monitoring Center (AOMC) at 1-800-242-8194 to confirm on which ASOS the new processor board will be installed. Ensure the site-specific data base is available, and the current configuration is uploaded before installing the new processor board.
2. Obtain approval from the responsible meteorologist-in-charge (MIC)/officer-in-charge (OIC)/Observer before starting the installation. Installation of the new processor board may be performed on any day of the month, if restrictions in steps 5 and 6 are satisfied.
3. Download the following data sets to the laptop using the direct command mode as outlined in Section 1.3.14.2, of the Site Technical Manual:

| Data Set | File Naming Convention ^a |
|----------------------|-------------------------------------|
| 5MIN | FMMDDdd.STA |
| OBS | HMMDDdd.STA |
| SYSLOG | SMMDDdd.STA |
| DAILY | DMMDDdd.STA |
| SHEF | YMMDDdd.STA |
| ARC5MIN ^b | ZMMDDdd.STA |

- a. MM = month of data
DD = beginning day of data
dd = end day of data
- b. Designate which archive to retrieve. Enter 1, 2, or 3 for this parameter.

4. Forward collected data to the responsible DAPM as soon as possible.

5. Do not start installation during inclement weather, precipitation, instrument flight rule conditions, or if any of those conditions are expected within 3 hours. The responsible MIC/OIC/Observer will define these meteorological conditions.
6. Do not begin new processor board installation when synoptic observations at 3, 6, 9, 12, 15, 18, and 21Z. Although half an hour should be sufficient, allow one hour to complete installation and restart ASOS.
7. Immediately before beginning work at NWS staffed sites, the MIC/OIC/Observer informs the tower, and any other critical users, that the ASOS will be turned off for the new ACU processor board upgrade. At an unstaffed site, the electronics technician (ET) informs the tower to log off and shutdown the displays [controller video displays (CVD) and Operator Interface Devices (OID)] to avoid unnecessary problems.
8. Begin the installation process immediately following the transmission of an hourly observation. At NWS-staffed sites, normal backup observing procedures will be implemented.
9. Sites without a local OID (i.e., No RS232 connected for the primary OID) must attach a terminal to the primary OID port of the ACU 1A9J22, or the SCA 1A9J19 before proceeding.
10. Use the following steps and upload the current system configuration to the AOMC.

CAUTION

Be sure to complete step d in the following procedure as soon as possible after step c. DO NOT upload the communications change made in step d to the AOMC.

- a. Log on as TECH.
- b. Key to the AOMC page (**REVUE-SITE-VERSN-AOMC**). Command an upload of all data files except VOICE AIRPORT NAME. Wait for all of the lines to change from "UPLOAD REQ" to "COMPLETE." When complete, press **EXIT**.
- c. DO NOT disable the local OID in step d.
- d. Key to the COMMS page (**REVUE-SITE-CONFIG-COMMS**). Disable all hardware and communication ports except the local OID. The system voice function will automatically broadcast a "not available" message. When complete, press **EXIT**.
- e. Key to the AOMC page (**REVUE-SITE-VERSN-AOMC**). Cancel the automatic update of the RS-232 comm started by the configuration changes made in step d. When complete, press **EXIT**.

PROCEDURE:**CAUTION**

To avoid any damage to circuit boards and integrated circuits, use proper ESD handling procedures (see EHB-5 for instructions).

PART 1 - Installing the Fuse and Jumper

1. With the solder side of the SBC facing up, remove the four PMC securing screws (see Figure 1). Do not remove the red tipped screws on the component side of the SBC.

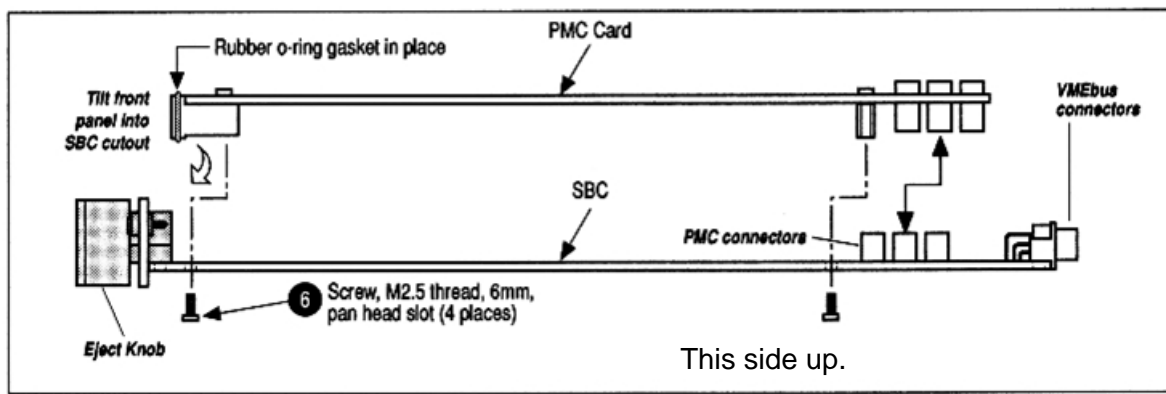


Figure 1. PMC Board Installation Attaching Screws

2. With the component side of the SBC facing up, carefully tilt the PMC up and away from the front panel of the SBC (see Figure 2).

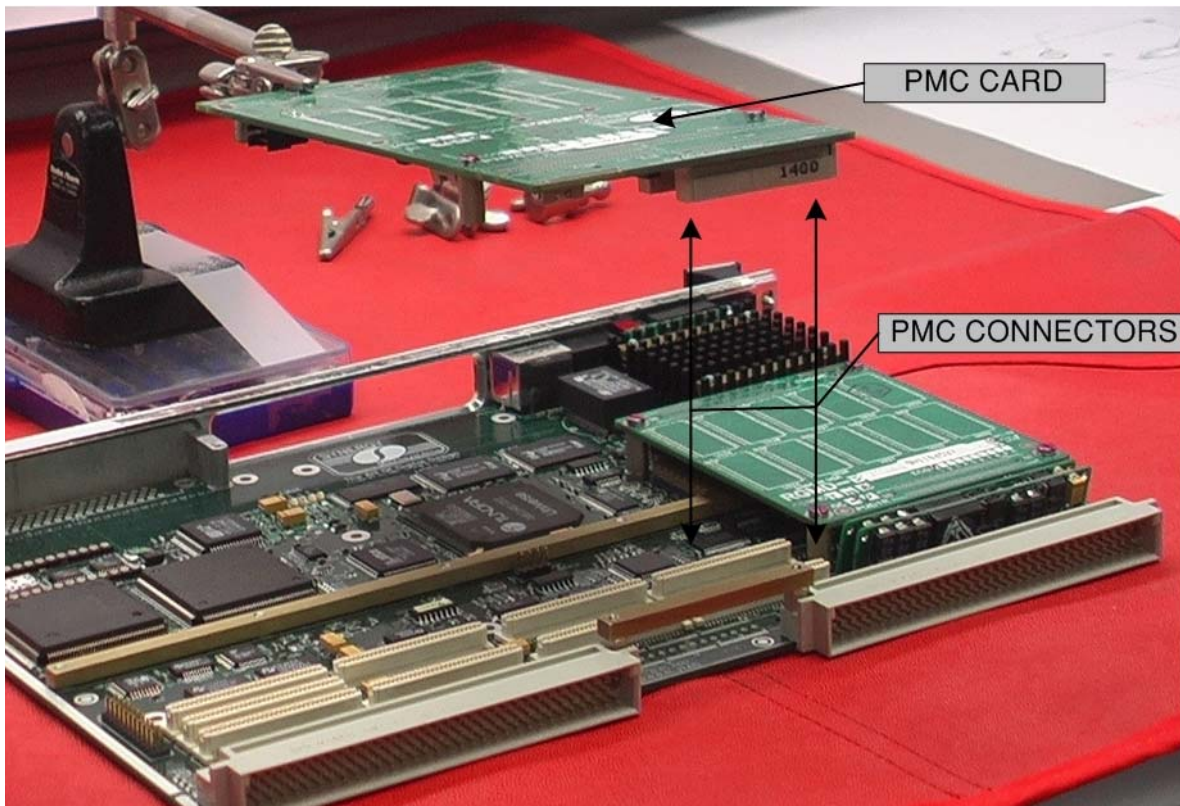


Figure 2. PMC Board Installation Alignment

3. With the component side of the PMC facing up, relocate the fuse from the Fuseblock (spare) to the Fuseblock (jumper, battery backup) (see Figure 3).

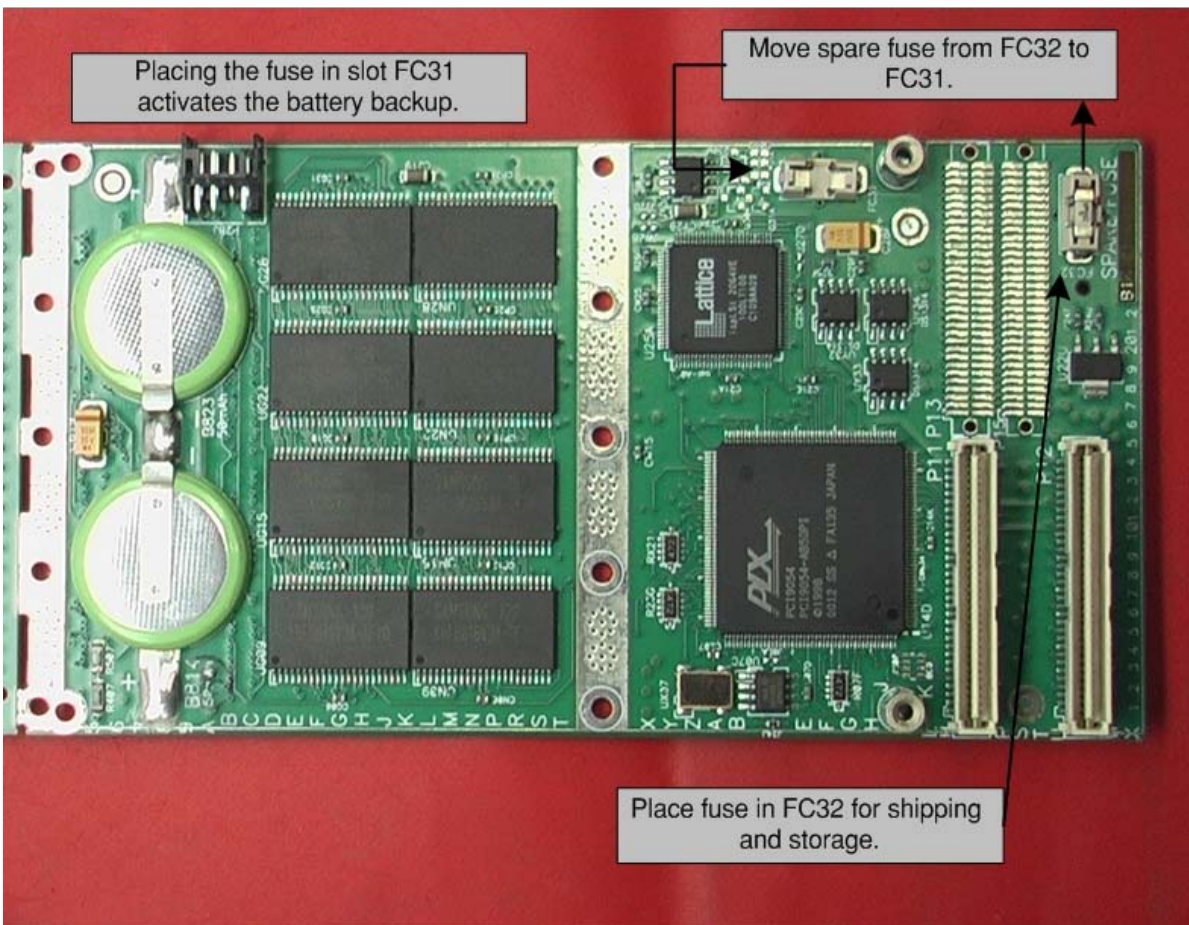


Figure 3. Fuse Installation

4. Reinstall the PMC to the SBC.

5. Ensure rubber O-ring gasket is seated properly prior to installation (see Figure 4).
LOCTITE 242 Blue may be applied to screw threads before reinstalling.

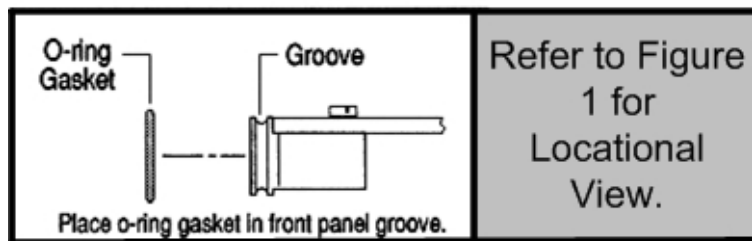
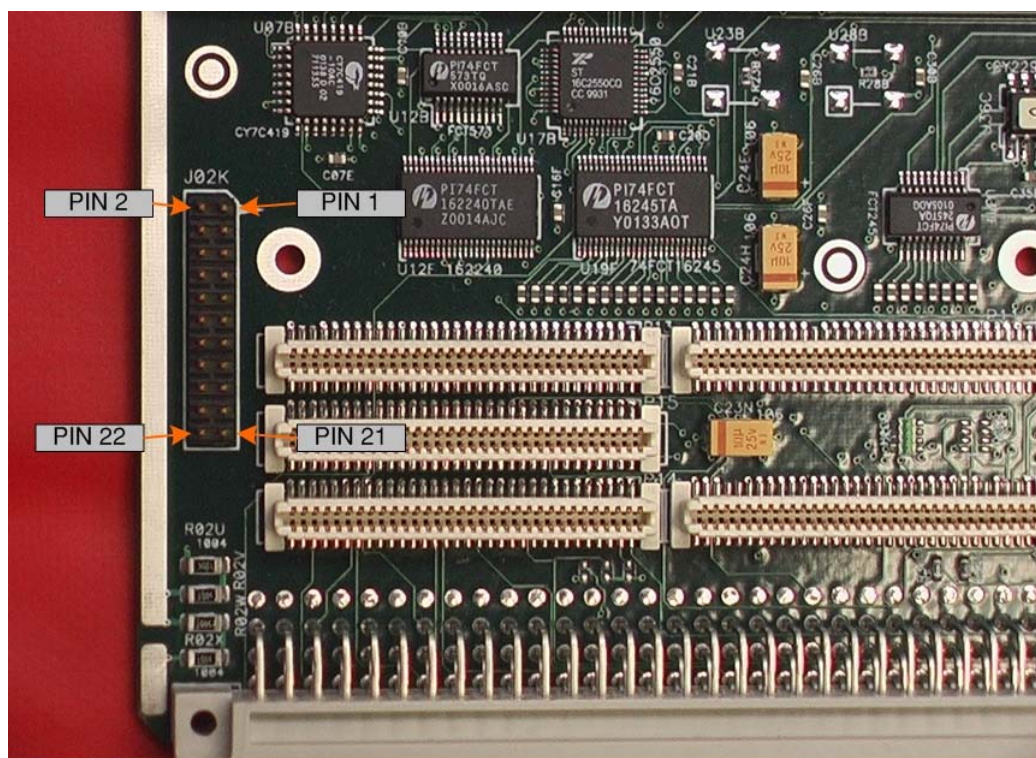


Figure 4. Rubber O-Ring Gasket PMC Board Installation

6. The default configuration for both the ASOS ACU and ASOS SCA at the J02K Pin-Out on the Synergy SBC is NO jumpers. Inspect the board and remove any jumpers that may be resident at the J02K location (see Figure 5). ALL ASOSs will be configured as a single processor.



PART 2 - Installing the New Processor Board

1. Power down the ACU or SCA as appropriate.
2. At the ACU or SCA, remove the blank panel at 1A2A4 (or 7A1A1A2A4). This panel must be removed to avoid damaging the memory board in slot A3.
3. Remove both CPU cards and the ACU memory board from the Card Rack Assembly 1A2.
4. **For ACU installations**, install IACK jumpers (S100-1A2-J1) on the P1 connectors at the back of slots 2 and 3 since these locations will no longer be used. Jump "IACKIN" pin 21 to "IACKOUT" pin 22 on the VME bus. (Reference ASOS STM page 2-39 Figure 2.4.2.)
For SCA installations, remove the VME rack from the back plane and carefully tilt the rack towards the ground. Install an IACK jumper at the back of slots 2 and 3. Reattach the VME rack to the SCA back plane.
5. Slide the new processor board into slot 1 on the Card Rack Assembly.
6. Cover slots 2 and 3 with blank panels and reinstall the blank panel at SCA slot 4.

PART 3 - ACU Fan Installation Procedure

1. With the hardware provided, attach the fan assembly to the fan assembly brackets.
2. Slide the entire fan assembly onto the lower VME mounting rail with the fan output directed towards the front of the ACU cabinet.
3. Slide the fan assembly forward until it is about one inch from the back of the VME rack.

4. Secure the assembly to the rail by tightening the screw on the bottom of the aft bracket (see Figure 6).



Figure 6. Fan Assembly

5. As displayed in Figure 6, loop the fan's power cord away from the face of the unit.
6. Plug the fan into the outlet strip if present. Otherwise, proceed to Attachment B for outlet strip installation instructions.

PART 4 - After Installation of the New Processor Board

1. Return power to the ACU or SCA as applicable.

NOTE: If the OID does not refresh within 30 seconds after power has been returned to the ACU, the new processor board has corrupted memory. In this case, proceed with the instructions outlined in PART 5 - Cold Start Procedures.

2. Return to the OID and perform the following:
 - a. Sign on as a TECH, using the default password.
 - b. Proceed to the External Communications Page (**REVUE-SITE-CONFIG-EXTRN**). Enter the primary AOMC phone number, 1 800 253 4717, and press **EXIT**.
 - c. Proceed to the Site Physical Page (**REVUE-SITE-PHYS**). Enter the three or four character SID and press **EXIT**.

- d. Proceed to the AOMC Page (**REVUE-SITE-VERSN-AOMC**). In approximately 10 minutes, ASOS will have "COMPLETED" all data file downloads from AOMC. When completed, press **EXIT**.
 - e. Proceed to the Define Configuration page (**REVUE-SITE-CONFIG-DEFIN**). Set the DEWPOINT sensor to either HO83, 1088, or DTS1.
 - f. **For Systems with DCPs**, download the DCP application software using (**MAINT-PROC-DCP**) Hard Reset. At the top of the screen, look for "% DOWNLOADED is displayed." Wait for the DCP download to complete. Press **EXIT**.
 - g. After DOWNLOAD is complete, proceed to the hardware configuration page (**REVUE-SITE-CONFIG-HDWE**). Change the number of CPUs to one.
 - h. Proceed to the software version page (**REVUE-SITE-VERSN-SW**) and verify the proper versions for all system software: (It may take 5-10 minutes for the information to be returned from the DCP).
 - i. Press **EXIT**.
3. After the modification has been completed, clear any maintenance flags that occur as a result of the restart.

| |
|--|
| NOTE: The operator must turn on report processing with this version of software. |
|--|

4. Proceed to the report processing control page (**REVUE-SENSR-STAT-PROC**). If applicable to the site, turn on **Report Processing for ALDARS**. If a single-site lightning detection sensor is installed, turn on **Report Processing for thunderstorm sensor**.
5. Turn on report processing for each sensor.
6. Press **EXIT**.
7. When ASOS is restarted at unstaffed sites, call to inform towers using CVDs and OIDs to turn on their displays. (At staffed sites, the MIC/OIC/Observer will call the tower.)
8. If on-site NWS-staff provides backup while the installation is underway, no special observation is needed when ASOS is restarted.
9. If there is no backup at a site, and a record observation was missed during the installation, a special observation must be taken when ASOS is restarted. The ET should sign onto the system as an observer and transmit a special observation from the generate special page (**GENOB-SPEC-XMIT**).
10. Logoff the system and leave ASOS running.

| |
|--|
| NOTE: The observer must sign off before the 5-minute edit time is up. |
|--|

11. Inform the office staff that ASOS is again operational. If less than 25 minutes remain until the next hourly observation, augmentation of the ceiling may be required. Augmenting several elements may be necessary (or even the entire observation). The chart below indicates how long it takes after a startup for ASOS to automatically report each observation element.

Table 1. Times Needed for Elements to be Reported Automatically

| | Minimum | Maximum |
|---------------------------|------------|-----------------|
| Pressure | 60 seconds | 10 minutes |
| Precipitation Amount | 60 seconds | NA ^a |
| Wind Speed and Direction | 2 minutes | 7 minutes |
| Precipitation Type | 2 minutes | NA ^a |
| Temperature and Dewpoint | 5 minutes | 10 minutes |
| Visibility | 10 minutes | 15 minutes |
| Obstruction to Visibility | 10 minutes | NA ^a |
| Ceiling | 30 minutes | 35 minutes |

a. Maximum time not applicable since phenomena may not be present. Minimum time applies if phenomena are present.

12. Verify the ASOS transmitted an hourly observation. Call the AOMC at 1-800-242-8194 and inform the operator of:
- Your location.
 - The installation of the new processor board/Mod 73 has been completed.
 - The ASOS is operational.
13. Sign onto the system as a technician and enter in the SYSLOG that maintenance has been completed (**MAINT-ACT-FMK**).
- Enter the FMK number as **Mod 73**.
 - Press **ENTER**.
 - On the second line of the screen, verify that only Mod 73 is displayed. If only Mod 73 is displayed, complete by entering **Y** in the [Y/N] area.
 - Check the SYSLOG and verify the FMK message.
 - Enter a comment in the SYSLOG stating the new ACU processor board has been installed.

- f. Before logging off from the OID, proceed to the upload page (**SITE-VERSN-AOMC-UP-LD**). This will command an upload of the site configuration files to the AOMC and ensure that both parties have the same set of data files.

NOTE: If the site configuration files are not uploaded to the AOMC before the technician leaves the site, the data on file at AOMC will not match the new site configuration.

14. At an expansion site with an air traffic control tower (ATCT), the ET will contact the ATCT and supply information on the following:
 - a. The ASOS maintenance has been completed.
 - b. The ASOS has been restored to service.
 - c. The ATCT CVDs, OIDs, and TRACON displays need to be turned on.

PART 5 - Cold Start Procedures

There are two different cold start procedures for the new processor board. Both differ from previous cold start procedures of the original Xycom boards in which a jumper was removed to manually zero out the non-volatile random access memory. The first method is performed at the OID. The second method involves the technician issuing a "fill memory" command to the new processor board's built-in configuration software via a laptop using ProComm.

1. OID Method.
 - a. At the OID, sign onto the system as technician.
 - b. Proceed to the Processor Status Page (**MAINT-PROC**).
 - c. Under the ACU heading, select the "COLD" option and press "RESET."
 - d. At the confirmation prompt, enter "Y" and press <RETURN>.
 - e. Enter your initials at the next prompt and press <RETURN>.

NOTE: The lights on the new processor board will cycle twice at this time. Once immediately after step e and then approximately 30 seconds later.

- f. After about 40 seconds, the 1-Minute Page will display *NEED SID AND AOMC PHONE*. Using the system default password, sign onto the system as technician.
- g. Proceed to the Physicals Page (**REVUE-SITE-PHYS**) and enter the *STATION IDENTIFIER*.
- h. Press **EXIT** to save this change.
- i. Proceed to the Externals Page (**REVUE-SITE-CONFIG-EXTRN**) and enter the *AOMC PRIMARY AOMC PHONE NO, 1 800 253 4717*.
- j. Press **EXIT** to save this change.

- k. After all the AOMC pages download, log off the system.
2. Laptop Method.
- a. With the laptop powered-down, connect the DB-9 to RJ-45 serial cable (S100-TE311) between COM 1 on the laptop and the SERIAL connector on front of the new processor card.

NOTE: The SERIAL connector is the top-most RJ-45 connector on the front panel of the new processor board. Apply power to the laptop and configure the port settings in ProComm as follows:

| | |
|------------------|------|
| Bits per second: | 9600 |
| Data bits: | 8 |
| Parity: | None |
| Stop bits: | 1 |
| Flow control: | None |

- b. On the new processor board, momentarily depress the reset switch found on the top of the board to the **left**. ProComm displays a pROBE prompt.
- c. Type the following command after the pROBE prompt:
pROBE+> fm f0800000..f0b00000 0

NOTE: This command is instructing the software to fill the memory (fm) between hexadecimal addresses f0800000 and f0b00000 with zeros (0).

- d. The new processor board must be re-booted to load the ACU firmware. On the new processor board, momentarily depress the reset switch found on the top of the new processor board to the **right**.

PART 6 - Shipping Instructions

After Modification Note 73 has been completed, package the old CPUs and memory board in antistatic packages and label each one as follows:

S100-1A2A1 for the CPU cards
S100-1A2A3 for the memory board

When installing Modification Note 73, it is important to remember to return the AACU Standard processor (S100-1A2A1), SCA Processor (S100-1A2A3), and Memory Board ACU (S100-1A2A3) to the NRC

USDOC/NOAA/National Weather Service
National Reconditioning Center
ASOS Repair Unit, W/OPS162
1520 East Bannister Road
Kansas City, MO 64131-3009

Until otherwise directed, the NEW Synergy AACU Processor Boards (S100-1A2A1-2 and S100-1A2A1-3) replaced as part of a Firmware upgrade or failure MUST be returned to NWS Headquarters for reprogramming and redistribution. Send the hardware to:

USDOC/NOAA/National Weather Service
1325 East West Highway
SSMC-16326, W/OPS12
Silver Spring, MD 20910-3283

All electronic hardware should be shipped in the protective (rigid) antistatic case or, at a minimum, a sealed antistatic bag. The protected hardware can then be placed in a rigid box suitable for shipping, with packing material as appropriate. Any failure information should accompany the hardware. This information should be written or typed on a piece of paper and include the serial number of the hardware.

Do not put paper or any other static producing material in the packaging with the board. Include any loose hardware in a separate bag/container external to board packaging.

REPORTING MODIFICATION:

Report the completed modification using the Engineering Management Reporting System (EMRS) according to the instructions in the NWS Instruction 30-2104, Maintenance Data Documentation, Part 4, and Appendix D. Include the following information on the EMRS report:

1. An equipment code of **AACU** or **ASCA** in block 7 for the modification to the ACU.
2. The appropriate serial number in block 8.
3. A modification number of **73D** in block 17a.

See Attachment C for a completed sample of the EMRS report. Contact Mike Brown at (301) 713-1892 x143 for further assistance with EMRS reporting.

Mark S. Paese
Director, Maintenance, Logistics, and Acquisition Division

Attachment A - Test Sites
Attachment B - Outlet Strip Installation
Attachment C - EMRS Report Sample

Attachment A - Test Sites

| | Site ID | City | State | Type | Region | Group |
|----|---------|--------------------|-------|------|----------|-------|
| 1 | 1V4 | ST. JOHNSBURY | VT | ACU | Eastern | 1 |
| 2 | 2WX | BUFFALO | SD | ACU | Central | 1 |
| 3 | CDJ | CHILLICOTHE | MO | SCA | Central | 1 |
| 4 | CZZ | CAMPO | CA | SCA | Western | 1 |
| 5 | DMH | BALTIMORE | MD | SCA | Eastern | 1 |
| 6 | GNA | GRAND MARAIS | MN | SCA | Central | 1 |
| 7 | MQE | MILTON | MA | ACU | Eastern | 1 |
| 8 | N60 | GARRISON | ND | ACU | Central | 1 |
| 9 | P28 | MEDICINE LODGE | KS | SCA | Central | 1 |
| 10 | P38 | CALIENTE | NV | ACU | Western | 1 |
| 11 | P58 | PORT HOPE | MI | SCA | Central | 1 |
| 12 | P59 | COPPER HARBOR | MI | SCA | Central | 1 |
| 13 | P68 | EUREKA | NV | SCA | Western | 1 |
| 14 | P69 | LOWELL | ID | SCA | Western | 1 |
| 15 | P75 | MANISTIQUE | MI | SCA | Central | 1 |
| 16 | SNT | STANLEY | ID | SCA | Western | 1 |
| 17 | SPD | SPRINGFIELD | CO | SCA | Central | 1 |
| 18 | 12N | ANDOVER | NJ | ACU | Eastern | 2 |
| 19 | 40J | PERRY-FOLEY | FL | ACU | Southern | 2 |
| 20 | 6R6 | DRYDEN | TX | SCA | Southern | 2 |
| 21 | 87Q | PT. PIEDRAS BLANCA | CA | ACU | Western | 2 |
| 22 | 8D3 | SISSETON | SD | ACU | Central | 2 |
| 23 | 9V9 | CHAMBERLAIN | SD | ACU | Central | 2 |
| 24 | CTY | CROSS CITY | FL | ACU | Southern | 2 |
| 25 | D07 | FAITH | SD | SCA | Central | 2 |
| 26 | GNT | GRANTS | NM | ACU | Southern | 2 |
| 27 | JDN | JORDAN | MT | SCA | Western | 2 |
| 28 | MTP | MONTAUK | NY | SCA | Eastern | 2 |
| 29 | P60 | YELLOWSTONE LAKE | WY | SCA | Central | 2 |
| 30 | P92 | SALT POINT | LA | SCA | Southern | 2 |
| 31 | REO | ROME | OR | SCA | Western | 2 |
| 32 | BVE | VENICE | LA | ACU | Southern | 3 |
| 33 | CUT | CUSTER | SD | ACU | Central | 3 |
| 34 | IGM | KINGMAN | AZ | ACU | Western | 3 |
| 35 | ILN | WILMINGTON | OH | ACU | Eastern | 3 |

| | Site ID | City | State | Type | Region | Group |
|----|---------|----------------|-------|------|----------|-------|
| 36 | INW | WINSLOW | AZ | ACU | Western | 3 |
| 37 | JCT | JUNCTION | TX | ACU | Southern | 3 |
| 38 | LIC | LIMON | CO | ACU | Central | 3 |
| 39 | LWD | LAMONI | IA | ACU | Central | 3 |
| 40 | MBG | MOBRIDGE | SD | ACU | Central | 3 |
| 41 | MHS | MT SHASTA | CA | ACU | Western | 3 |
| 42 | PGA | PAGE | AZ | ACU | Western | 3 |
| 43 | PHP | PHILIP | SD | ACU | Central | 3 |
| 44 | RMG | ROME | GA | ACU | Southern | 3 |
| 45 | RNM | RAMONA | CA | ACU | Western | 3 |
| 46 | SAD | SAFFORD | AZ | ACU | Western | 3 |
| 47 | SDB | SANDBERG | CA | ACU | Western | 3 |
| 48 | SHN | SHELTON | WA | ACU | Western | 3 |
| 49 | AAF | Apalachicola | FL | ACU | Southern | 4 |
| 50 | BNO | Burns | OR | ACU | Western | 4 |
| 51 | CAO | Clayton | NM | ACU | Southern | 4 |
| 52 | ENN | Nenana | AK | ACU | Alaska | 4 |
| 53 | FMN | Farmington | NM | ACU | Southern | 4 |
| 54 | GCC | Gillette | WY | ACU | Central | 4 |
| 55 | GSP | Greer | SC | ACU | Eastern | 4 |
| 56 | IRK | Kirksville | MO | ACU | Central | 4 |
| 57 | LLJ | Challis | ID | ACU | Western | 4 |
| 58 | MKK | Kaunakaki | HI | ACU | Pacific | 4 |
| 59 | MLF | Milford | UT | ACU | Western | 4 |
| 60 | MYL | McCall | ID | ACU | Western | 4 |
| 61 | POF | Poplar Bluff | MO | ACU | Central | 4 |
| 62 | RQE | Window Rock | AZ | ACU | Western | 4 |
| 63 | RTN | Raton | NM | ACU | Southern | 4 |
| 64 | WAL | Wallops Island | VA | ACU | Eastern | 4 |

Attachment B - Outlet Strip Installation

PART 7 - Installation

1. Referring to Figure 4, at the back of the ACU cabinet remove the top screw, lockwasher, and flat washer, from the vertical unistrut and 1A3 cross member on the right side of the cabinet.
2. Insert the top flap of the outlet strip under the cross member. Reinstall the screw, lockwasher, and flatwasher.

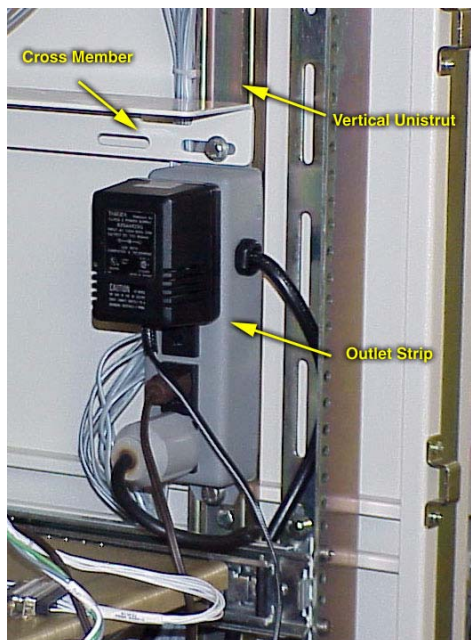


Figure 4. Outlet Strip Installation

3. Cut the plug from the end of the outlet strip. Pull back the outer insulation approximately eight inches.
4. Strip approximately 0.25 inches of insulation from each wire end. Connect these wires at the following positions on the power distribution assembly (1A7):

| From Outlet Strip | Power Distribution Assembly |
|-------------------|-----------------------------|
| Black Wire | 1A7-23C |
| White Wire | 1A7-22C |
| Green Wire | 1A7-21C |

Attachment C - EMRS Report Sample

A26 Detail form - ESCM2, SILVER SPRING, MD - EMRS ANALYST - Microsoft Internet Explorer

GENERAL INFORMATION

NEW RECORD WFO* UNR Document No.* UNR30327000

1. Open Date Open Time 2. Op Initials 3. Response Priority 4. Close Date Close Time

03/25/2003 09:00 WSH ☐ Immediate ☐ Low 03/25/2003 10:00

☐ Routine ☒ Not Applicable

5. Maintenance Description 372 characters left ASOS

ASOS Mod Note 73B - Replacement Acquisition Control Unit (ACU) processor board and Single Cabinet Assembly (SCA) processor board

EQUIPMENT INFORMATION

6. Station ID* 7. Equipment Code 8. Serial Number 9. TM 10. AT 11. How Mal

CUT AACU 000946 M M 999

Alert: Time Remaining: (For Block 12 use only)

13. PARTS USAGE and CONFIGURATION MANAGEMENT REPORTING

| ASN | Vendor Part No. (New Part) | Serial Number (Old Part) | Serial Number (New Part) | |
|-----|----------------------------|--------------------------|--------------------------|------------|
| | | | | New Row |
| | | | | Delete Row |

14. WORKLOAD INFORMATION

| a. Routine | b. Non-Routine | c. Travel | d. Misc | e. Overtime |
|--------------------|--------------------|--------------------|--------------------|--------------------|
| Hours Minutes | Hours Minutes | Hours Minutes | Hours Minutes | Hours Minutes |
| | | | 1 0 | |

MISCELLANEOUS INFORMATION

15. Maintenance Comments 622 characters left

ASOS Mod Note 73B - Replacement Acquisition Control Unit (ACU) processor board and Single Cabinet Assembly (SCA) processor board

16. Tech Initials BNM

17. SPECIAL PURPOSE REPORTING INFORMATION

| a. Mod No. | b. Mod Act/Deact Date | c. Block C | d. Trouble Ticket No. | e. Block E |
|------------|-----------------------|------------|-----------------------|------------|
| 73B | 03/25/2003 | | | |

Commit A26 Place on Hold Copy A26 New A26 Cancel

Done Internet